

# PCI Serial Card

2 Port High-Speed RS-232 Powered PCI Serial Card

4 Port High-Speed RS-232 Powered PCI Serial Card

**PCI2S650PW**

**PCI4S650PW**

**Instruction Manual**

**StarTech.com**

The Professionals' Source for Hard-to-Find Computer Parts



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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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## Introduction

Thank you for purchasing a StarTech.com powered PCI serial card. This product adds high speed serial ports to your computer, and includes 5 and 12 volt power support for connected peripherals. For added flexibility this card also supports 5 volt (32-bit PCI) and 3.3 volt (64-bit PCI-X) computer interfaces, and includes drivers for 64-bit editions of Windows.

## Features

- Adds high speed RS-232 serial ports to your computer
- Additional power connector to support 5 or 12 volt self-powered serial peripherals
- Works in both standard 32-bit (5 volt) PCI and 64-bit (3.3 volt) PCI-X expansion slots
- Provides transfer rates of up to 920 Kbits/sec, supports half and full duplex
- Fully Plug and Play compliant for easy setup and configuration

## Before You Begin

### System Requirements

- A computer running Windows 2003/XP/2000/NT/ME/98SE/98/95, DOS/Windows 3.1, Linux/UNIX
- An available standard or low-profile PCI or PCI-X slot
- A CD-ROM or other optical drive (for driver software installation)

### Contents

This package should contain:

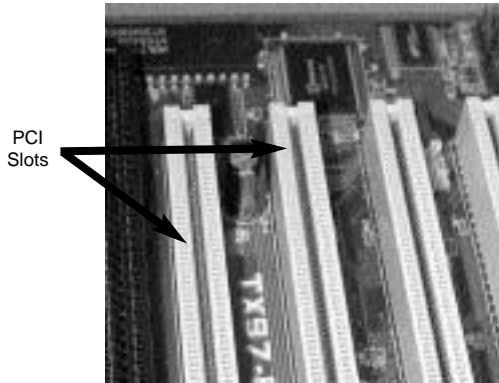
- 1 x PCI serial card (includes a low-profile slot bracket)
- 1 x Installation CD
- 1 x 2-port or 4-port DB9 "dongle" connector
- 1 x Instruction Manual

**WARNING!** PCI cards, like all computer equipment, can be severely damaged by static electricity. Be sure that you are properly grounded before opening your computer case or touching your PCI card. StarTech.com recommends that you wear an anti-static strap when installing any computer component. If an anti-static strap is unavailable, discharge yourself of any static electricity build-up by touching a large grounded metal surface (such as the computer case) for several seconds. Also be careful to handle the PCI card by its edges and not the gold connectors.

## Installation

This section will guide you through the installation of your PCI card and the related software. Please read through the instructions carefully and complete each step in the order listed.

### Installing the Card

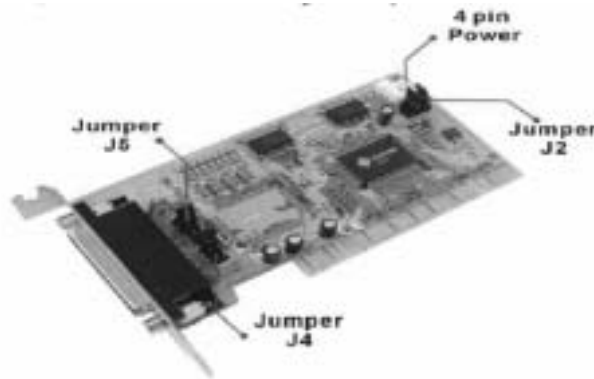


1. Make sure that your system is unplugged and you are grounded.
2. Remove the cover of your system (see your computer's user manual for details, if necessary) and gently turn your computer onto its side.
3. (a) Locate an empty PCI or PCI-X slot (usually white in color) and remove the metal plate that covers the rear bracket. If present, PCI-X slots will be slightly longer than a standard PCI slot. You may need a Phillips screwdriver to perform this step. **Retain this screw!** You will need it to secure the card later.  
  
(b) If you are installing the card in a low-profile slot, remove the standard bracket by removing the screws on the underside of the card. Place the low-profile bracket onto the card and align the holes in the card with those in the bracket. Ensure the orientation of the new bracket matches the one you removed. Re-secure the bracket with the screws. **Do not over-tighten.**
4. Gently insert the card into the empty slot, making sure it is firmly seated.
5. Secure the card in place using the screw you removed in Step 3.
6. If you wish to use this card to power compatible external serial peripherals over a data connection, you should also connect a power cable from your power supply to the 4-pin SP4 power connector on the outer edge of the card. The SP4 power connector is the same type of power connector commonly used to power 3.5" floppy disk drives (see example of the card connector at right).
7. Connect the port dongle provided to the port on the back of the card.
8. Put your computer case back on.



SP4

## Configuring the Jumpers: PCI2S650PW



The card uses jumpers to set internal and external power voltages, and to configure which serial ports will receive 5v, 12v, or RI signal (unpowered) through the 9th pin.

**J2:** Sets internal (bus) voltage and the external power drawn through the SP4 power connector (external)

**J4 and J5:** Sets voltage for each individual DB9 port

Power Supply	Int5V Int12V	Int5V Ext12	Ext5V Int12V	Ext5V Ext12V
Jumper Setting	<p><b>J2</b></p> <p>12VP 12VA 5VP 5VA</p>	<p><b>J2</b></p> <p>12VP 12VA 5VP 5VA</p>	<p><b>J2</b></p> <p>12VP 12VA 5VP 5VA</p>	<p><b>J2</b></p> <p>12VP 12VA 5VP 5VA</p>

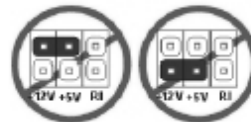
\*Please select 5V, 12V, or RI Signal for COM1 and COM2 using J4 and J5

	5V	12V	RI
J4 and J5 Jumper Setting	<p>+12W +5V RI</p>	<p>+12W +5V RI</p>	<p>+12W +5V RI</p>

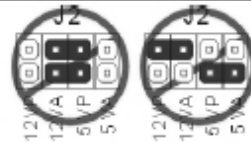


Failure to observe these warnings could cause damage to the serial card, computer, and peripherals.

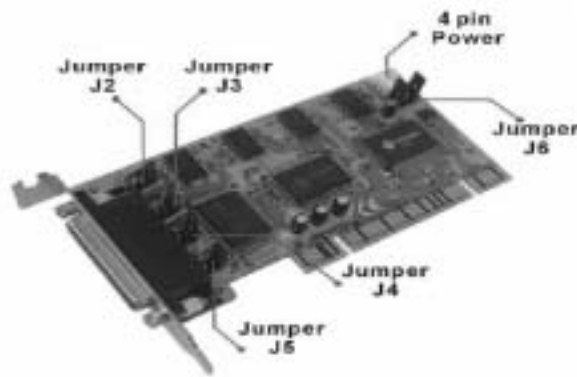
Do not set the jumpers **J4** and **J5** to supply both 5v and 12v power at the same time.



Ensure jumper caps are placed vertically in line with the markings on the board, not "across" settings.



## Configuring the Jumpers: PCI4S650PW



The card uses jumpers to set internal and external power voltages, and to configure which serial ports will receive 5v, 12v, or RI signal (unpowered) through the 9th pin.

**J6:** Sets internal (bus) voltage and the external power drawn through the SP4 power connector (external)

**J2 thru J5:** Sets voltage for each individual DB9 port

Power Supply	Int5V Int12V	Int5V Ext12	Ext5V Int12V	Ext5V Ext12V
Jumper Setting	<p><b>J6</b></p> <p>12VP 12VA 5 VP 5 VA</p>	<p><b>J6</b></p> <p>12VP 12VA 5 VP 5 VA</p>	<p><b>J6</b></p> <p>12VP 12VA 5 VP 5 VA</p>	<p><b>J6</b></p> <p>12VP 12VA 5 VP 5 VA</p>

\*Please select 5V, 12V, or RI Signal for COM1~COM4 using J2~J5

	5V	12V	RI
J2 - J5 Jumper Setting	<p>+12W +5V RI</p>	<p>+12W +5V RI</p>	<p>+12W +5V RI</p>

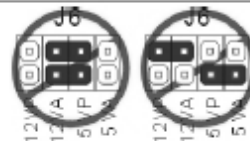


Failure to observe these warnings could cause damage to the serial card, computer, and peripherals.

Do not set any of the jumpers **J2-J5** to supply both 5v and 12v power at the same time.



Ensure jumper caps are placed vertically in line with the markings on the board, not "across" settings.



### Installing the Drivers

If you lose your driver disk, these drivers are available as a free download from our website. Visit [www.startech.com](http://www.startech.com) and click on the Downloads link for more information.

#### Windows 95/98/ME

1. Windows will detect that new hardware is installed and launch the Add New Hardware Wizard. Click **Next** and choose the **Search for the best driver for your device (Recommended)** option. Click **Next**.
2. On the next screen select only **Specify a location**. Choose **Browse**.
3. In the file selection box, double click the **win9x** folder under **CD-ROM Drive (X:)**. Click **OK**. The drive letter and name of the drive where the CD is located may depend on your system configuration.
4. The file location box under **Specify a location** will now contain the path to the files. Click **Next**.
5. The Wizard will inform you that "Windows is now ready to install the best driver for this device..." Click **Next**. The Wizard will complete the installation. Click **Finish**.

#### Windows 2000/XP/2003 (includes 64-bit editions)

1. Windows will launch the **Add New Hardware Wizard**. Click **Next**.
2. Choose the **Search for a suitable driver...** option and click **Next**.
3. Check only the **CD-ROM drives** option. Ensure the installation disk is inserted in the floppy drive. Click **Next**.
4. Windows will display a message stating that "Windows has found a driver for this device". Click **Next**. (If you are presented with multiple choices for the driver, choose the driver file in the **IO\PCI IO\WHQL Driver for 2K\_XP\_2003** folder.) Choose **Yes** or **Continue Anyway** if you are warned that the driver file has not been digitally signed.
5. Windows will display a message that states "Windows has finished installing software for this device". Click **Finish**.
6. Windows will continue to detect and install any remaining new devices. If the Add New Hardware Wizard is launched again, repeat steps 1 through 5 from above.

### Other Operating Systems

For installation of the serial card's software under other operating systems (Windows NT DOS/Windows 3.1, Linux etc.) please consult the documentation contained in the appropriate folder for your OS located inside the **IO\PCI IO\** directory on the installation CD.

### Verifying Your Installation

#### Windows 95/98/ME

1. Go to **Start > Settings > Control Panel**.



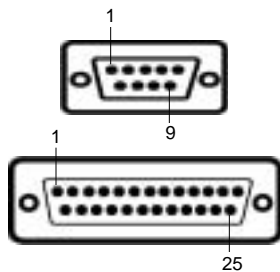
2. Double click **System**.
3. Click the **Hardware** tab.
4. If the card does not appear with a red **x** or yellow exclamation point (!) next to it, Windows has not detected a problem with the installation and the card should function normally.

#### Windows 2000/XP/2003

1. Go to **Start > Settings > Control Panel**.
2. Double click **System**.
3. Click the **Hardware** tab and choose **Device Manager**.
4. If the card does not appear with a red **x** or yellow exclamation point (!) next to it, Windows has not detected a problem with the installation and the card should function normally.

## Specifications

Card Interface	32-bit PCI (5v), 64-bit PCI-X (3.3v)
FIFO Size	128 KBytes software, 32 bytes hardware
Max. Data Transfer Rate	920 Kbits/sec., supports half and full duplex
Connectors	1 x proprietary 44-pin (female) to dongle 2 x DB9 (male) to peripherals ( <b>PCI2S650PW</b> ) 4 x DB9 (male) to peripherals ( <b>PCI4S650PW</b> ) 1 x internal SP4 (male) power connector
Signals Supported (RS-232)	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND (see below for pinout)
Power to Peripherals	5 or 12 volts to peripheral supported over DB9 connection
OS Support	Windows 2003 Server, XP, 2000, NT, ME, 98, 95, DOS/Windows 3.1, Linux (Driver support included for 64-bit editions of Windows 2003 and 2000 Server.)
Operating Tolerances	32°~135°F (0°~57°C), 5~95% rel. humidity
UART Chipset	Sunix SUN1889 (16C650 compliant)
Certifications	Regulatory: FCC Class B, CE Other: Microsoft WHQL



Pin	DB9 Assignment	DB25 Assignment
1	DCD	NC
2	RD	TD
3	TD	RD
4	DTR	RTS
5	GROUND	CTS
6	DSR	DSR
7	RTS	GROUND
8	CTS	CD
9	<b>RI / 5V / 12V</b>	n/a
20	n/a	DTR
22	n/a	<b>RI / 5V / 12V</b>

(Any unshown pins are not used.)

## Accessory Products from StarTech.com

Contact your local StarTech.com dealer or visit [www.startech.com](http://www.startech.com) for cables or other accessories that will help you get the best performance out of your new product.

Modem Cable DB9F-DB25M

**MC3MF**

6 ft. AT Modem Cable (male to female)

**MC6MF**

6 ft. 9-pin Straight Through Cable (male to female)

**MXT100**

25 ft. 9-pin Straight Through Cable (male to female)

**MXT100\_25**



Adapter DB9F to DB25F

**AT925FF**

Adapter DB9F to DB25M

**AT925FM**

Slimline Adapter DB9F to DB25M

**AT925SFM**

10 ft. Cross Wired Serial/Null Modem Cable DB9 female to DB25 male

**SCNM925FM**

10 ft. Cross Wired Serial/Null Modem Cable DB9 (female to female)

**SCNM9FF**

25 ft. Cross Wired Serial/Null Modem Cable DB9 (female to female)

**SCNM9FF25**

10 ft. Cross Wired Serial/Null Modem Cable DB9 (female to male)

**SCNM9FM**

6 ft. Modem Cable DB9 (female to female)

**MXT100FF**

## Technical Support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit **[www.startech.com/support](http://www.startech.com/support)** and access our comprehensive selection of online tools, documentation, and downloads.

## Warranty Information

This product is backed by a lifetime warranty. In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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